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# Preparing the Next Generation in Academic Medicine: Recruiting and Retaining the Best

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**In many ways, we are living and working in an unprecedented time in academic medicine. New technologies, scientific discovery, unparalleled availability of medical information and knowledge are currently paired with increasing (albeit slow) gender, cultural, and now generational diversity of the faculty. To prepare the next generation, we must simultaneously be the student and the teacher. As the student, our charge is to understand the current medical and academic environs and recognize the attributes, experiences, and expectations that each generational cohort brings to medicine. As the teacher, we must identify, extract, and communicate the tenets that remain constants for success in academic medicine today and reject those that are no longer relevant. Throughout the years, the basic motivation that drives success has remained constant while the individuals (the players), the environment, and the definition of success in academics have become more varied.**

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## Changing landscape in medicine and biomedical research

There are certain "drivers" that have changed the landscape of medicine and will certainly influence the current generation of physicians and investigators and their respective choices. With regard to medical and health professional training, some educators have called for a rigorous overhaul of the present approach to medical training that was instigated early in the past century (Flexner, 1910). Such calls are based on the expense and inefficiency of our current approach and the frequent failure of medical education to meet the needs of the communities (Miller *et al.*, 2010). To address this concern, one group proposed a new model for health-care workforce development (Miller *et al.*, 2010). The model is composed of physician and other health-care professionals training within an interprofessional competency-based modular learning system, having shared foundational coursework embedded in an infrastructure of strong information technology. Educational outcomes would be directly linked to health outcomes (Miller *et al.*, 2010). Interestingly, this concept is consistent with many of the mandates outlined in the Patient Protection and Affordable Care Act of 2010 and the creation of accountable care organizations (Berwick, 2011). Although outlining the details of such reform is beyond the scope of this discussion, recognition of these changes and implications for the practice of medicine and biomedical research is an important consideration as we train, advise, and prepare the next generation of physicians and investigators.

Superimposed on these challenges is the current federal funding crisis. The Federation of American Societies for Experimental Biology recently issued a report on National Institutes of Health (NIH) funding trends between 1995 and 2012 (FASEB, 2011). In this statement, several findings were reported: (i) the number of research grants funded by the NIH has declined almost every year over the past six years, and 2,000 fewer grants are now funded compared with 2004; (ii) 1,000 fewer competing awards were made in 2010 than in 2003; and (iii) success rates for new applications have decreased over the past three years and are currently at 17%. This report also outlines the dire effect that could potentially occur when the resources of the American Recovery and Reinvestment Act (2009) are exhausted. Such is the uncertain research environment facing our junior faculty investigators today; thus, novel strategies and approaches are needed. In fact, the NIH has made the call for individuals of dissimilar backgrounds to form collaborative teams to most effectively perform health-related translational research (Zerhouni, 2003). Kong and Segre (2010) recently outlined the increasing demands and challenges of the physician engaged in laboratory research, the PhD interested in clinical research, and the typical competing demands facing the MD/PhD researcher in the current medical and research environment. They describe an effective way to "bridge the translational research gap" through the formation of successful partnerships between physicians and basic scientists working in interdisciplinary teams to address clinically relevant questions. Several established and productive collaborations already exist in cutaneous biology (Grice *et al.*, 2008; Hobbs *et al.*, 2010; Petukhova *et al.*, 2010).

Junior faculty are "coming of age" in an environment that is very different from that of their predecessors, particularly the generations before them. In addition, they typically have incurred significant financial debt by the end of their medical school and graduate training, a reality that ultimately factors into their career choice. Moreover, those aspiring to a more basic science/research track are confronted with

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longer research training periods compared with their predecessors. In fact, by the time they reach faculty positions, the average age for those receiving their first R01 funding is 42, a significant increase compared with a decade ago (http://grants.nih.gov/grants/new_investigators) (Figure 1). However, each generation has faced unique challenges. We must similarly remain optimistic for the future of medicine and research, instill a cautious optimism in our residents and junior faculty pursuing an academic career, equip them with the necessary tools, and outline novel strategies and approaches to achieve success. Certain tenets are key. Seeking out high-quality training and achieving excellent practice standards executed with integrity and professionalism are goals that cannot be compromised. Success, as well as career satisfaction, is ultimately driven by motivation—a passion for achievement for its own sake, a drive for constant improvement (Goleman *et al.*, 2001), and, finally, a desire to make an impact—on one's patients, specialty, area of investigation, the academic profession in general, and, for those of us in the academic environs, our trainees. How do we assist the next generation of physicians and investigators to define and hone their professional goals and become adequately equipped to attain their goals while continually fueling their passion to achieve them?

**Understanding the "players"**

Much has been written about communication between generational cohorts—challenges due to diverse (and often divergent) experiences, attitudes, and values. It is imperative not only that we understand the background and beliefs of those whom we are trying to motivate and prepare to be our successors (and improve on our success) but also that we have insight into the values and motivating factors in our own careers. Currently, several groups are actively represented in academic medicine. Although absolute age cutoffs may vary, the population spectrum can been defined as follows (Schroer, 2011): the "baby boomers" comprise a vast group born between 1946 and 1964. The early boomers were post–World War II babies who came of age in the Vietnam War. Despite that, opportunities were generally good. Later boomers experienced the onset of AIDS and, as a whole, did not have the benefit of the same excellent fiscal environment (jobs, housing) that their predecessors did. Nonetheless, as a group, boomers are felt to be optimistic. They typically have a driven work ethic, a love/hate view of authority, and a team perspective, and they usually lead by consensus. They garner personal gratification from their relationships (Raines, 2003). Generation Xers (born 1965 to 1976) are the first to grow up in an era of day care and divorce. They are the best educated generation and, interestingly, approach most things, including family life, with more caution and pragmatism than their parents (Schroer, 2011). They generally have a balanced work ethic, are unimpressed by authority, believe in leadership by competence, and have a self-oriented, "what's in it for me" outlook (Raines, 2003). Finally, the most contemporary cohort, generation Y (born 1977 to 1994), is the largest since the boomers and the most technologically savvy (Schroer, 2011). They have been described as pampered, nurtured, and continually entertained throughout their lives and consequently are both high performing and high maintenance. They believe in their own worth and have a "speak-your-mind" philosophy (Armour and Bliss, 2005).

We should also consider diversity issues such as gender, culture, and ethnicity as we guide and prepare our successors to become the future leaders in research and medicine. Enrollment of women and minorities in medical and graduate school has gradually increased over the past several decades. Women currently comprise close to 50% of all medical students (2010–2011) compared with 31% in 1982–1983 (http://www.aamc.org). However, there has not been a proportionate gain in numbers of women in senior faculty and leadership positions (AAMC, 2007–2008). This trend is analogous to that seen in business and industry. Interestingly, women with careers in academics tend to leave academic medicine at a higher rate compared with their male counterparts (Bickel, 1988), undoubtedly contributing to this trend.

Underrepresented minorities (URMs) include African Americans (blacks), Mexican Americans, mainland Puerto Ricans, Native Americans, and Alaskan Natives. Non-underrepresented minorities (NURMs) include Asian and other Hispanic groups. Data from the Association of American Medical Colleges (AAMC) regarding the diversity of medical school faculty similarly demonstrate the low representation of URMs in our ranks (Figure 2). In an earlier study looking at more specific demographics, URMs were more likely to be male, more likely to be in a medical subspecialty, spent more time in clinical

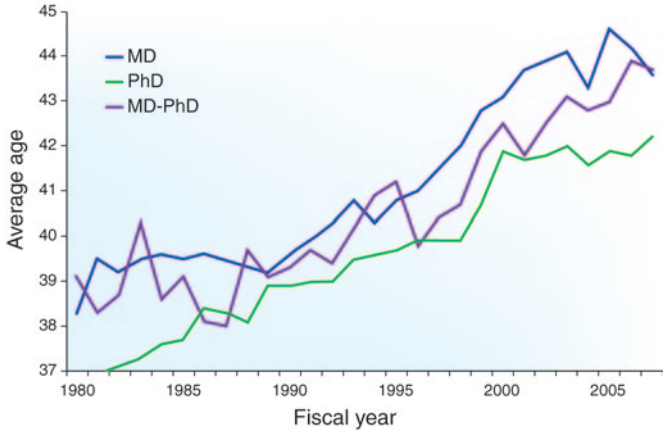


**Figure 1. Average age of first-time RO1-equivalent principal investigator by degree.** Data from Office of Extramural Research, National Institutes of Health (http://report.nih.gov/NIH_Investment/PPT_sectionwise/NIH_Extramural_Data_Book/NEDB%20SPECIAL%20TOPIC-AVERAGE_AGE.ppt#266,5,AVERAGE%20AGE%20OF%20FIRST-TIME%20R01-EQUIVALENT%20PRINCIPAL%20INVESTIGATORS%20BY%20DEGREE).

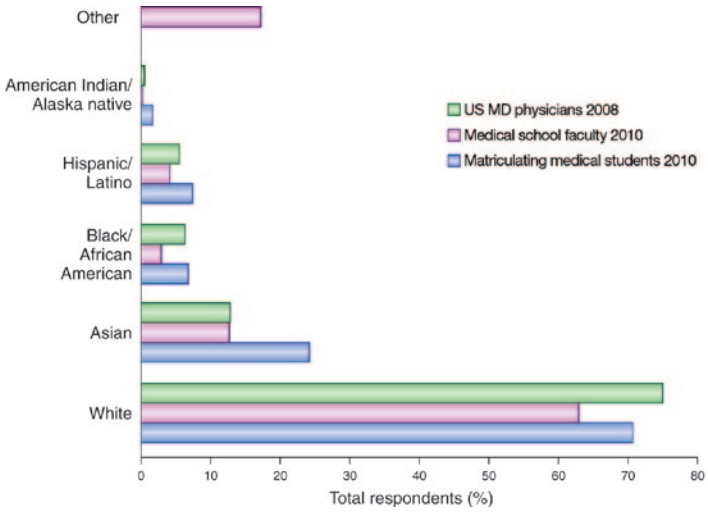


**Figure 2. Physician workforce diversity.** *US MD physicians 2008* based on data from the AAMC's minority physician database (AAMC, 2010). US medical school graduates from 1978 to 2008. "Asian" includes Chinese, Filipino, Korean, Japanese, Vietnamese, Indian/Pakistani, and other Asian. "Hispanic/Latino" includes Mexican American, Puerto Rican, and other Hispanic. *Medical school faculty 2010* based on AAMC data faculty roster, "Distribution of US Medical School Faculty by Sex and Race/Hispanic Origin" (https://www.aamc.org/data/facultyroster/reports/169876/usmsf10.html). "Other"—reported as "other," "unknown," or multiracial and faculty not reporting as Asian; black; Native American/Alaskan, Hawaiian/OPI; Hispanic Latino; or white. *Matriculating medical students 2010* based on AAMC Matriculating Medical Student Questionnaire 2010 (https://www.aamc.org/download/165992/data/msq2010.pdf.pdf) on self-identified race/ethnicity. (Percentages may not sum to 100% because multiple responses are allowed.)

activities, and were less likely to be in the basic sciences than both NURMs and majority faculty members (Peterson *et al*., 2004). Although their reported career satisfaction was lower, and many reported experiencing some racial or ethnic bias in their careers, the good news was that they were compensated at similar levels and were equally likely to achieve senior academic rank as their peers. Nonetheless, because of their low career satisfaction, URMs (similar to women) were found to more often consider leaving academic medicine (Palepu *et al*., 2000). Data on attrition rates support these findings (Figure 3).

In one survey of medical school faculty discontent (Lowenstein *et al*., 2007), reasons identified for leaving an academic career included lack of recognition of clinical work, absence of a feeling of an "academic community," and inadequate feedback regarding progress toward promotion. Managing work–life balance topped the list of reasons for leaving; although this concern was shared by men and women, it has been identified as a particular consideration in the early careers of female faculty (Humphrey and Smith, 2010). Interestingly, one suggestion to help achieve such balance has been to change the conventional norm of "hours spent at work" as a perceived measure of productivity to more objective measures (Eagly and Carli, 2007), a paradigm shift that would undoubtedly benefit men and women alike.

Finally, recognizing gender and ethnic differences is also important in preparing residents, graduate students, and junior faculty for positions of leadership. Gender differences have been best studied. In fact, it has been found that men characteristically hold a more hierarchical view of leadership and use position and resources to motivate those within their ranks to a common end, whereas women attempt to garner "buy-in" and motivate behavior to the good of the organization by sharing information and power (Humphrey and Smith, 2010). In traditional organizations where the majority of leadership positions are held by men, this leadership style may often be perceived negatively and as ineffective (Eagly and Carli, 2007). Ethnic and racial differences have also been determined to influence leadership style (Waring, 2003), although there is a paucity of literature on this subject. Nonetheless, the importance of leadership diversity in the academic environment, as well as its contribution to organizational success, has been well established (Winston, 2001). Persons in senior positions in any organization, including academic medicine, must therefore recognize the dissimilarities that gender and ethnicity may present, identify any organizational bias, and work to educate and change the system to facilitate strengths and concerns of our junior colleagues as we guide them to assume positions of leadership.

### Successful recruitment

Recognizing and understanding these differences should facilitate communications. Just as important, this insight can empower the mentoring relationships that develop in guiding these individuals toward professional growth and academic success. Strategies have been proposed to strengthen the recruitment and retention of generation X into faculty and leadership roles. Many of these may equally apply to diversity candidates. For the more senior adviser, suggestions include that he or she (i) recognize and address these formative differences in background with the advisees up front, share information and engage the advisee in problem solving, offer frequent and honest feedback, and avoid comparison of the environment today to that of previous generations; (ii) create departments that have flexibility in the workplace by legitimizing less-than-full-time appointments that will facilitate retention of both valued women and men; and (iii) provide trainees and junior faculty with ready access to educational opportunities that allow them to turn their "intellectual capital" into "academic career capital." Finally, it is appropriately noted that to support these improvements, medical schools must not only recognize but also reward mentoring as a core academic responsibility (Bickel and Brown, 2005).

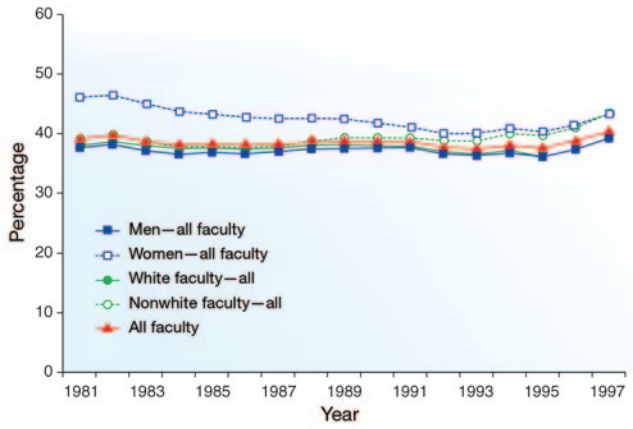


**Figure 3. Medical school faculty attrition.** Percentage of attrition from academic medicine for 17 10-year academic cohorts by demographic group. Every full-time faculty member in each of the 17 academic years was tracked for 10 years to determine retention and attrition percentages. Reprinted with permission from the Association of American Medical Colleges (https://www.aamc.org/download/67968/data/aibvol8no4.pdf).

Successful recruitment of faculty at all levels, however, must be guided by certain principles. First, potential faculty members must be able to clearly articulate their career goals. If this individual is a junior faculty recruit, he or she must at least be able to identify a career path, i.e., a primarily clinical or research-oriented path. It is then the responsibility of the chief or chair to determine whether this goal is realistic and engage in a frank discussion with the individual and outline what is necessary to achieve the goal. Finally, and most importantly, the chief or chair must determine whether there are appropriate institutional, departmental, or divisional development, mentorship, and financial resources that can be committed to the individual to ensure that he or she will have an excellent chance for achieving academic success.

It is important to realize, throughout these interactions, that the generation Xer expects the career-path discussion to include specifics of time allocation, available resources, and transparency with respect to benchmarks and compensation, while simultaneously allowing for some flexibility (e.g., legitimizing part-time positions, incorporating support systems that improve efficiencies at work). Inherent in this is their mind-set of constant information gathering and sharing that can instigate seemingly lengthy negotiations. The more senior advisor, if uninitiated with respect to generational differences, may interpret these expectations as unrealistic "demands" indicative of a lack of commitment or trust. It is, quite simply, reflective of their generational pragmatism and "speak your mind" mentality.

### Being a role model and a mentor

The importance of having physician and senior investigator "role models," particularly early in one's career, cannot be overestimated. By definition, a role model is a person whose behavior in a particular role is imitated by others; a certain standard of excellence is exhibited by the role model. Role modeling is different from mentoring because there needs to be no formal relationship or support between the individuals involved. In early trainees, appropriate role models effectively demonstrate important components of one's profession, including the skills, ethics, attitudes, and values involved in the practice of medicine (Reed and Wright, 2010). In fact, identifying a role model has been demonstrated to be an important part of training. Certain behaviors have been associated with being an effective and excellent role model, including dedicating a greater percentage of time to teaching, demonstrating the psychosocial aspects of one's profession, and emphasizing the doctor–patient relationship (Reed and Wright, 2010). The development of professionalism has been linked to the effect of role models (Cruess and Cruess, 1997).

The importance of mentorship to academic success has long been an accepted concept and held to be a core responsibility of medical school faculty. In one systematic review of mentoring in academic medicine, this perception was supported—although rigorous, cross-discipline, well-designed studies were felt to be lacking (Sambunjak *et al.*, 2006). Nonetheless, having a mentor has been consistently linked to career progress in academic medicine (Jackson *et al.*, 2003). The importance of purposeful and planned mentoring is, in fact, recognized by the NIH because mentoring of postdoctoral trainees is expected by senior faculty, is recognized as grant-related activity, and is a mandatory component of mentored awards (http://grants.nih.gov/training/careerdevelopmentawards.htm). Traditional mentoring partnerships involve an experienced, more senior mentor paired one on one with a less experienced, more junior mentee. These partnerships may be initiated by either individual on the basis of mutual scientific or clinical interests or may be the result of a more formal mentoring program in which individuals are purposefully paired (Mayer *et al.*, 2008). This model has historically proven to be successful in advancing the careers of junior faculty (Palepu *et al.*, 1998).

More recently, however, the concept of a mentoring "mosaic" in which cross-discipline and interdepartmental mentoring relationships are formed has been encouraged in an attempt to provide the overall guidance and support to be able to meet the increasing demands and challenges of a successful academic career in a somewhat unbiased manner. The success of cross-mentoring is illustrated by the success of one straightforward program in which junior and senior faculty from separate departments were paired for three consecutive years in short curriculum vitae review sessions to provide feedback that facilitated academic development (Von Feldt *et al.*, 2009).

Other forms of mentoring can also be incorporated into either traditional or mosaic models of mentoring. Peer

mentoring employs a group of individuals who are similar in background and academic focus but are at varied stages of their careers—the more senior members of the group serve to coach the more junior (Higgins, 2010). When multiple mentoring models are employed, guidance for research support and meeting educational goals may be provided by one mentor and support and advice on work–life balance and institutional politics provided by others (Mayer *et al.*, 2008). Mentoring responsibilities typically progress as an individual advances through his or her career (Figure 4). Finally, for any of these models to be successful, it is a two-way street—the "mentee" must prove to be a responsible, motivated, honest, organized, and willing partner (Sambunjak *et al.*, 2006). Successful mentoring relationships are as dependent on the hard work and commitment of the mentee as they are on the mentor. The mentee must take ultimate responsibility for his or her academic achievement and success.

Mentors serve many roles, including that of teacher, counselor, motivator, advisor, and possibly sponsor and role model (Omary, 2008). Many of these functions may not be inherent skills of every senior faculty member or appointed mentor. To this end, several institutions offer programs for their senior faculty through their development offices, and participation should be encouraged. Again, one individual may not be able to offer every facet of mentoring to their mentee, and different mentoring models can be applied. In general, however, being able to identify the mentoring needs of junior faculty, having a working knowledge of faculty expertise across disciplines and institutions, and utilizing power and influence to facilitate (as well as to accept) appropriate mentoring relationships are important responsibilities of an effective mentor in academic medicine. More specifically, certain guiding principles that lay the groundwork for successful mentoring have been proposed. Briefly, these include the following.

1. Determine how the mentee likes to spend time (i.e., help the mentee determine what type of career he or she wants to pursue—clinical, clinician-educator, research, administration).

2. Be honest and give advice, but be careful not to convey disappointment in the mentee's choices.

3. Follow through by providing appropriate support and feedback in a timely manner. Negative feedback should always be accompanied by appropriate coaching and discussion toward obtaining insight into the identified problem, guiding independent decision making rather than providing solutions in the development of a mutually agreed plan to address the concern. Engaging outside expertise in areas of competency that may not exist within the institution can be considered, if appropriate.

4. Do not become friends.

5. Terminate mismatched relationships (applies to both mentors and mentees).

6. Be clear and direct regarding credit for work on grants, papers, etc. Be explicit from the beginning.

7. Ultimately encourage separation—this is primarily the responsibility of the mentor and is paramount to the mentee's career development and recognition as an independent academician (Detsky and Baerlocher, 2007).

Finally, "reverse mentoring"—in which senior members of the faculty learn from their more junior faculty, residents, and students—is an important learning concept that should be appropriately incorporated into all mentoring strategies (Humphrey, 2010).

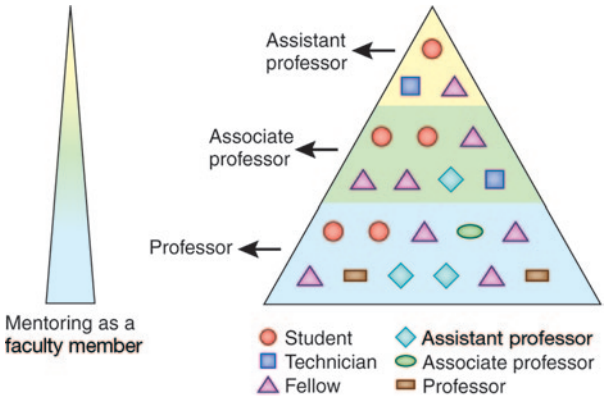


**Figure 4. The reverse pyramidal progression of mentoring.** The role of mentoring in academic research formally begins as an assistant professor and continues to increase as one progresses in academic rank, involving multiple individuals as outlined in the text. In the laboratory, postdocs would be analogous to fellows, mentoring students, and technicians. One could then extend this pyramid paradigm to clinical medicine, with fellows mentoring residents and students, senior residents mentoring medical students and junior residents, and medical students mentoring their fellow students. Reprinted with permission from Omary (2008).

### Mentorship versus sponsorship

Some, but not all, mentors can also serve as a sponsor for their mentee. Sponsorship is a special relationship in which the mentor not only gives career guidance, feedback, and advice but also uses his or her influence with other senior faculty or national figures to nominate and support the mentee for posts of increased visibility and position leading to advancement (Ibarra *et al.*, 2010). Often, effective mentors may not have the position and power to serve as a sponsor, but they may be able to help the mentee identify an appropriate sponsor and develop a strategy toward attaining a sponsor relationship.

Sponsorship is not a requisite for success in an academic career, but it may facilitate career development at both an institutional and a national level.

**Mentoring needs specific to academic track**

As mentioned above, one of the primary responsibilities of any mentor is to help the mentees identify how they like to spend their time and what type of academic career they envision for themselves. In this role, the mentor must be able to honestly assess the candidate's qualifications and training to date and determine whether the stated goal is realistic. If the mentor does not possess the background to make this determination, it is his or her obligation to seek another senior faculty member to serve as an additional adviser or mentor. If the goal is deemed reasonable, it is then the work of the mentor(s)/mentee to design an appropriate development path toward that goal. More specifically, this will involve active discussion and mutual agreement on the tools and training that are required to achieve the best chance for success. Instilling and encouraging motivation and maintaining the drive for achievement and constant improvement are best attained by coaching toward and fueling the mentee's career passion.

Academic tracks across institutions vary. For the physician, the clinician educator track characteristically involves faculty who spend more than 50% of their time in teaching activities and patient care. They may be program directors and be involved in curriculum development. If they engage in research, it is usually related, but not limited to, medical student and resident education. Clinical excellence is expected, and the major features include excellence in reputation, communication, and interpersonal skills; professionalism and humanism; diagnostic acumen; skillful negotiation of the health-care system; knowledge; a scholarly approach to clinical care; and passion for clinical medicine (Christmas *et al*., 2008). Achieving a regional and national reputation in their field, accomplishing scholarly activity that contributes to the advancement of medicine, or teaching is strongly encouraged and, in fact, expected to effectively carry out administrative responsibilities. Clinician-track faculty must be educated in the criteria for promotion and advancement early in their careers. In addition, they should have regular meetings with their mentor(s), including review of their curriculum vitae.

Faculty who are actively engaged in research as their primary academic endeavor are characteristically considered research, or investigator track, faculty. This group may include MD, PhD, and MD/PhD faculty. The physician-scientist (MD or MD/PhD) typically assumes this academic role because he or she is trained to ask clinically relevant questions in a health-research environment that lead to the development of research projects linking basic and clinical sciences (Zemlo *et al*., 2000). Individuals on the research track may be engaged in basic science, disease-focused, or patient-oriented research. Depending on the specific area of investigation, the last two facets of research can be considered "translational" research—by one broad definition, "the application of the scientific method to address a health need" (Coller, 2009).

Developmental strategies of mentoring, adjusted according to the level of training/rank of the mentee, have been outlined for physician–scientists and PhD scientists as well. These may be formal and/or informal relationships and include multiple mentoring models. For example, medical students and undergraduates can be engaged in summer research projects and also may learn through observation of their research professors. Graduate and medical student training program (MSTP) students attain research and critical thinking skills from their thesis committee members and their defined curriculum and should also be engaged in developing their scientific networks. Residents interested in pursuing a research career may choose formal research projects or paths during residency and obtain exposure to physician-investigators in their clinical practice. Postdocs and fellows should have an appointed research mentor, an oversight committee, and a defined curriculum and be engaged in publishing scholarly works in addition to actively developing their scientific networks. Finally, junior faculty should have faculty mentors, annual (or more frequent) development reviews, and meetings with their mentor(s) and chief or chair (Schwartz and Hosterrer, 2009).

A comprehensive study identifying the specific challenges facing physician–scientists was published more than a decade ago, and many of the issues and the proposed recommendations remain poignant today (Zemlo *et al*., 2000). The need for postdoctoral training was emphasized, and the importance of T32 training grants, F32 fellowships, and the K series of awards as funding mechanisms was identified. Despite this, however, the study noted a significant decline in the number of these grants that had been awarded to physician–scientists during the period studied, 1985 to 1997. One proposed factor in this decline was the increasing financial pressures in academic health centers that may force physician–scientists to perform more patient care and abandon their research careers. Several recommendations were set forth, and many centered on developing institutional strategies that emphasize the importance of biomedical research to the practice of medicine, as well as expanding the funding mechanisms to support the training and mentoring of these individuals. In fact, one of the recommendations has been implemented: establishing a national debt-forgiveness program for both PhD and MD young investigators who have received appropriate training and are actively pursuing a research career (http://www.lrp.nih.gov). Additionally, as a long-standing effort to retain talented scientists and innovative thinking, the NIH implemented a policy in 2009 recognizing new-stage and early-stage investigators (within 10 years of terminal degree) for special consideration during grant review. Although it is a bit premature to measure the outcome for this policy implementation, it certainly provides hope to young investigators to pursue research tracks as a career path worth taking. For individuals who receive

their MD/PhD training through MSTPs and are granted tuition allowance, family and social fiscal pressures may be relevant in their career-choice decisions, even though tuition debt is not. Interestingly, a recent study found that of MSTP graduates who had trained in dermatology up through 2008, 44% were in private practice compared with 16% of the graduates overall (Brass *et al*., 2010). Our specialty should investigate the reasons for this disparity and look to develop and implement mechanisms (some of which are outlined above) to increase the likelihood of physician–scientist retention in academic dermatology.

Mentors of all research faculty have the responsibility of training the mentee (or helping the mentee seek out training) in the technical skills that are appropriate to his or her research field and teaching the individual how to efficiently and critically read the literature and how to reason and extrapolate from research principles (Kaushansky, 2009). The mentor should serve as, or identify, an appropriate research sponsor—one who can help nominate and promote the mentee into positions of visibility in his or her area of research. Finally, the criteria for promotion and the elements of academic achievement required for obtaining tenure should be articulated, and frequent one-on-one reviews of academic progress toward this goal should take place.

### Legacy

Mentoring is indeed a continuum, delivered by one or a combination of individuals at varying stages within one's professional career. It is the passing on of knowledge, professional values, and academic approach (Schrubbe, 2001). It is rarely static—mentees become mentors, and persons who mentor always have (or have had) a mentor. Thus, in many ways, mentoring is a professional legacy to posterity (Healy and Welchert, 1990). Success in mentoring involves the desire to pass the torch to the next generation (Luna and Cullen, 1995) and instills in those mentored a motivation and desire to carry forward the transmission of knowledge, principles, and approach. In this way, mentoring, in fact, carries with it a legacy of both opportunity and responsibility (Setness, 1996).

### Conclusions

So, how do we assist this next generation of physicians and investigators to articulate and achieve their professional goals and maintain their motivation and passion for their career? We must recognize and accept the motivating factors, as well as the personal and professional stressors, that junior faculty identify in pursuing an academic career. Achieving work–life balance is a high priority, and we can address this by incorporating flexibility into their development strategy. Information sharing, engagement in problem solving, and transparency are expected, as is honest feedback, both positive and negative (Bickel and Brown, 2005).

We should be purposeful in helping our junior colleagues to clearly identify their academic goals and work with them to navigate the institution and the specialty in general to obtain the training and skills needed to accomplish these goals. Facilitating exposure to appropriate leaders in their field of interest and potential sponsors in specialty organizations is important. They, in turn, should be willing, motivated, and hard-working partners in their own development. It is an exciting time in academic medicine and biomedical research. Synergies between the laboratory and the clinic are being encouraged (and rewarded), and consequently new alliances are being forged. It is a time, and an environment, in which an individual's expertise can be applied and extended beyond his or her own skill set. Finally, and perhaps most importantly, we must lead by example—continually demonstrating passion, commitment, and professionalism; a persistent curiosity; and desire for knowledge—and convey the satisfaction attained by contributing to the achievement and success of those who will take our place.

CONFLICT OF INTEREST

The authors state no conflict of interest.

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